



[4910-13-P]

## **DEPARTMENT OF TRANSPORTATION**

### **Federal Aviation Administration**

#### **14 CFR Part 39**

**[Docket No. FAA-2014-0529; Directorate Identifier 2013-NM-260-AD]**

**RIN 2120-AA64**

**Airworthiness Directives; Airbus Airplanes**

**AGENCY:** Federal Aviation Administration (FAA), DOT.

**ACTION:** Notice of proposed rulemaking (NPRM).

**SUMMARY:** We propose to supersede Airworthiness Directive (AD) 2011-13-11 and AD 2013-16-09, for all Airbus Model A318, A319, A320, and A321 series airplanes.

AD 2011-13-11 currently requires an amendment of the airplane flight manual (AFM), repetitive checks of specific centralized fault display system (CFDS) messages, an inspection of the opening sequence of the main landing gear (MLG) door actuator for discrepancies if certain messages are found, and corrective actions if necessary.

AD 2013-16-09 currently requires an inspection to determine airplane configuration and part numbers of the landing gear control interface unit and MLG door actuators; and, for affected airplanes, repetitive inspections of the opening sequence of the MLG door actuator, and replacement of the MLG door actuator if necessary; and provides optional terminating action for the repetitive inspections. Since we issued AD 2011-13-11 and AD 2013-16-09, we have determined that the interval of the MLG door opening sequence inspection must be reduced. This proposed AD would reduce the interval of the MLG door opening sequence inspection. This proposed AD would also require replacing or

modifying certain MLG door actuators. We are proposing this AD to detect and correct deterioration of the damping ring and associated retaining ring of the MLG door actuator, which can sufficiently increase the friction inside the actuator to restrict opening of the MLG door by gravity, during operation of the landing gear alternate (free-fall) extension system. This condition could prevent the full extension and/or down-locking of the MLG, possibly resulting in MLG collapse during landing and consequent damage to the airplane and injury to occupants.

**DATES:** We must receive comments on this proposed AD by [INSERT DATE 45 DAYS AFTER DATE OF PUBLICATION IN THE FEDERAL REGISTER].

**ADDRESSES:** You may send comments by any of the following methods:

- Federal eRulemaking Portal: Go to <http://www.regulations.gov>. Follow the instructions for submitting comments.
- Fax: (202) 493-2251.
- Mail: U.S. Department of Transportation, Docket Operations, M-30, West Building Ground Floor, Room W12-140, 1200 New Jersey Avenue SE., Washington, DC 20590.
- Hand Delivery: U.S. Department of Transportation, Docket Operations, M-30, West Building Ground Floor, Room W12-140, 1200 New Jersey Avenue SE., Washington, DC, between 9 a.m. and 5 p.m., Monday through Friday, except Federal holidays.

For Airbus service information identified in this proposed AD, contact Airbus, Airworthiness Office – EIAS, 1 Rond Point Maurice Bellonte, 31707 Blagnac Cedex,

France; telephone +33 5 61 93 36 96; fax +33 5 61 93 44 51; email [account.airworth-eas@airbus.com](mailto:account.airworth-eas@airbus.com); Internet <http://www.airbus.com>. For General Electric service information identified in this AD contact GE Aviation, Customer Support Center, 1 Neumann Way, Cincinnati, OH 45215; phone: 513-552-3272; email: [cs.techpubs@ge.com](mailto:cs.techpubs@ge.com); Internet: <http://www.geaviation.com>. You may view this referenced service information at the FAA, Transport Airplane Directorate, 1601 Lind Avenue SW., Renton, WA. For information on the availability of this material at the FAA, call 425-227-1221.

#### **Examining the AD Docket**

You may examine the AD docket on the Internet at <http://www.regulations.gov> by searching for and locating Docket No. FAA-2014-0529; or in person at the Docket Management Facility between 9 a.m. and 5 p.m., Monday through Friday, except Federal holidays. The AD docket contains this proposed AD, the regulatory evaluation, any comments received, and other information. The street address for the Docket Operations office (telephone (800) 647-5527) is in the ADDRESSES section. Comments will be available in the AD docket shortly after receipt.

**FOR FURTHER INFORMATION CONTACT:** Sanjay Ralhan, Aerospace Engineer, International Branch, ANM-116, Transport Airplane Directorate, FAA, 1601 Lind Avenue SW., Renton, WA 98057-3356; telephone 425-227-1405; fax 425-227-1149.

## **SUPPLEMENTARY INFORMATION:**

### **Comments Invited**

We invite you to send any written relevant data, views, or arguments about this proposed AD. Send your comments to an address listed under the ADDRESSES section. Include “Docket No. FAA-2014-0529; Directorate Identifier 2013-NM-260-AD” at the beginning of your comments. We specifically invite comments on the overall regulatory, economic, environmental, and energy aspects of this proposed AD. We will consider all comments received by the closing date and may amend this proposed AD based on those comments.

We will post all comments we receive, without change, to <http://www.regulations.gov>, including any personal information you provide. We will also post a report summarizing each substantive verbal contact we receive about this proposed AD.

### **Discussion**

On June 16, 2011, we issued AD 2011-13-11, Amendment 39-16734 (76 FR 37241, June 27, 2011). AD 2011-13-11 required actions intended to address an unsafe condition on all Airbus Model A318, A319, A320, and A321 series airplanes. The unsafe condition is the deterioration of the damping ring and associated retaining ring of the MLG door actuator, which can sufficiently increase the friction inside the actuator to restrict opening of the MLG door by gravity, during operation of the landing gear alternate (free-fall) extension system. This condition could prevent the full extension

and/or down-locking of the MLG, possibly resulting in MLG collapse during landing and consequent damage to the airplane and injury to occupants.

On July 26, 2013, we issued AD 2013-16-09, Amendment 39-17547 (78 FR 48286, August 8, 2013). AD 2013-16-09 required actions intended to detect and correct certain configuration of landing gear control interface unit and actuators, which could prevent the full extension or down-locking of the MLG, possibly resulting in MLG collapse during landing and consequent damage to the airplane and injury to occupants on all Airbus Model A318, A319, A320, and A321 series airplanes.

Since we issued AD 2011-13-11, Amendment 39-16734 (76 FR 37241, June 27, 2011), and AD 2013-16-09, Amendment 39-17547 (78 FR 48286, August 8, 2013), we have determined that the interval of the MLG door opening sequence inspection must be reduced in order to detect and correct deterioration of the damping ring and associated retaining ring of the MLG door actuator, which can sufficiently increase the friction inside the actuator to restrict opening of the MLG door by gravity, during operation of the landing gear alternate (free-fall) extension system. This condition, if not detected and corrected, could prevent the full extension and/or down-locking of the MLG, possibly resulting in MLG collapse during landing and consequent damage to the airplane and injury to occupants.

The European Aviation Safety Agency (EASA), which is the Technical Agent for the Member States of the European Community, has issued EASA Airworthiness Directive 2013-0288, dated December 6, 2013 (referred to after this as the Mandatory

Continuing Airworthiness Information, or “the MCAI”), to correct an unsafe condition for the specified products. The MCAI states:

Some operators reported slow operation of the main landing gear (MLG) door opening/closing sequence, leading to the generation of ECAM warnings during the landing gear retraction or extension sequence.

Investigations showed that the damping ring and associated retaining ring of the MLG door actuator deteriorate. The resultant debris increases the friction inside the actuator which can be sufficiently high to restrict opening of the MLG door by gravity, during operation of the landing gear alternate (free-fall) extension system.

This condition, if not corrected, could prevent the full extension and/or down locking of the MLG, possibly resulting in MLG collapse during landing or rollout and consequent damage to the aeroplane and injury to occupants.

EASA AD 2006-0112R1 ([http://ad.easa.europa.eu/blob/easa\\_ad\\_2006\\_0112\\_R1\\_superseded.pdf/AD\\_2006-0112R1\\_1](http://ad.easa.europa.eu/blob/easa_ad_2006_0112_R1_superseded.pdf/AD_2006-0112R1_1)) was issued to require repetitive inspections of the opening sequence of the MLG door in order to identify the defective actuators, and to introduce as an optional terminating action Airbus production Modification (MOD) 38274 and associated Service Bulletin (SB) A320-32-1338, which incorporate an improved retaining ring, located on the piston rod's extension end, and a new piston rod with machined shoulder to accommodate the thicker section of the modified retaining ring.

After in-service introduction of the new MLG door actuator, Part Number (P/N) 114122012 (Post MOD 38274 – SB A320-32-1338), several operators reported failures of internal parts of the MLG door actuator. Investigations confirmed that these failures could result in slow extension of the actuator rod, delaying the MLG door operation, or possibly stopping just before the end of the stroke, preventing the door to reach the fully open position.

EASA AD 2011-0069R1

([http://ad.easa.europa.eu/blob/easa\\_ad\\_2011\\_0069\\_R1\\_superseded.pdf/AD\\_2011-0069R1\\_1](http://ad.easa.europa.eu/blob/easa_ad_2011_0069_R1_superseded.pdf/AD_2011-0069R1_1)) (which corresponds to FAA AD 2011-13-11, Amendment 39-16734 (76 FR 37241, June 27, 2011)), which supersedes EASA AD 2006-0112R1 required an amendment of the applicable Airplane Flight Manual (AFM), repetitive checks of specific Centralized Fault Display System (CFDS) messages, repetitive inspections of the opening sequence of the MLG door actuator and, depending on findings, corrective action(s).

Since that [EASA] AD was issued, Airbus introduced a reinforced MLG door actuator P/N 114122014 (MOD 153655). Airbus issued SB A320-32-1407 containing instructions for in-service replacement of the affected MLG door actuators, or modification of the actuators to the new standard.

In addition, following a recent occurrence with a gear extension problem, the result of additional analyses by Airbus revealed that the CFDS expected specific messages may not be generated and as a result, repetitive checks of messages are not effective for aeroplanes fitted with landing gear control interface unit (LGCIU) interlink communication ARINC 429 (applied in production through Airbus MOD 39303, or in service through Airbus SB A320-32-1409), in combination with LGCIUs 80-178-02-88012 or 80-178-03-88013 in both positions and at least one MLG door actuator pre MOD 153655 (SB A320-32-1407 – SB 114122-32-105) installed.

Prompted by these findings, EASA issued Emergency AD 2013-0132-E

([http://ad.easa.europa.eu/blob/easa\\_ad\\_2013\\_0132\\_E\\_superseded.pdf/EAD\\_2013-0132-E\\_1](http://ad.easa.europa.eu/blob/easa_ad_2013_0132_E_superseded.pdf/EAD_2013-0132-E_1)) (which corresponds to FAA AD 2013-16-09, Amendment 39-17547 (78 FR 48286, August 8, 2013)) to require identification of the affected aeroplanes to establish the configuration and, for those aeroplanes, repetitive inspections of the opening sequence of the MLG door actuator and, depending on findings, replacement of the MLG door actuator. That [EASA] AD also provided an optional terminating action by disconnection of the interlink for certain LGCIUs, or

in-service modification of the aeroplane through Airbus SB A320-32-1407 (equivalent to production MOD 153655).

Since those [EASA] ADs were issues, analyses performed by Airbus have revealed that the MLG door opening sequence inspection interval must be reduced, and that the (previously optional) terminating action must be made mandatory.

For the reasons described above, this [EASA] AD retains the requirements of EASA AD 2011-0069R1 and [EASA] AD 2013-0132-E, which are superseded, but with reduced inspection intervals, and requires replacement or modification [including related investigative and corrective actions], as applicable, of the affected MLG door actuators as terminating action for the monitoring, repetitive checks and inspections.

The related investigative actions include an inspection for damage (including nicks and burns) of the damping rings and an inspection for mechanical damage of the piston rod. Corrective actions include replacing or modifying parts. You may examine the MCAI in the AD docket on the Internet at <http://www.regulations.gov> by searching for and locating it in Docket No. FAA-2014-0529.

#### **Relevant Service Information**

Airbus has issued Service Bulletin A320-32-1390, Revision 02, dated October 23, 2013; and General Electric has issued Service Bulletin 114122-32-105, Revision 1, dated March 26, 2013. The actions described in this service information are intended to correct the unsafe condition identified in the MCAI.

#### **FAA's Determination and Requirements of this Proposed AD**

This product has been approved by the aviation authority of another country, and is approved for operation in the United States. Pursuant to our bilateral agreement with

the State of Design Authority, we have been notified of the unsafe condition described in the MCAI and service information referenced above. We are proposing this AD because we evaluated all pertinent information and determined an unsafe condition exists and is likely to exist or develop on other products of the same type design.

#### **Differences Between this Proposed AD and the MCAI or Service Information**

Paragraph (17) of the MCAI incorrectly refers to paragraph (11) of the MCAI as requiring inspections; however, paragraph (11) of the MCAI specifies replacement actions. Paragraphs (j), (l), and (p) of this proposed AD refer to the inspections specified in paragraph (17) of the MCAI.

#### **“Contacting the Manufacturer” Paragraph in this Proposed AD**

Since late 2006, we have included a standard paragraph titled “Airworthy Product” in all MCAI ADs in which the FAA develops an AD based on a foreign authority’s AD.

The MCAI or referenced service information in an FAA AD often directs the owner/operator to contact the manufacturer for corrective actions, such as a repair. Briefly, the Airworthy Product paragraph allowed owners/operators to use corrective actions provided by the manufacturer if those actions were FAA-approved. In addition, the paragraph stated that any actions approved by the State of Design Authority (or its delegated agent) are considered to be FAA-approved.

In an NPRM having Directorate Identifier 2012-NM-101-AD (78 FR 78285, December 26, 2013), we proposed to prevent the use of repairs that were not specifically developed to correct the unsafe condition, by requiring that the repair approval provided

by the State of Design Authority or its delegated agent specifically refer to the FAA AD. This change was intended to clarify the method of compliance and to provide operators with better visibility of repairs that are specifically developed and approved to correct the unsafe condition. In addition, we proposed to change the phrase “its delegated agent” to include a design approval holder (DAH) with State of Design Authority design organization approval (DOA), as applicable, to refer to a DAH authorized to approve required repairs for the proposed AD.

One commenter to the NPRM having Directorate Identifier 2012-NM-101-AD (78 FR 78285, December 26, 2013) stated the following: “The proposed wording, being specific to repairs, eliminates the interpretation that Airbus messages are acceptable for approving minor deviations (corrective actions) needed during accomplishment of an AD mandated Airbus service bulletin.”

This comment has made the FAA aware that some operators have misunderstood or misinterpreted the Airworthy Product paragraph to allow the owner/operator to use messages provided by the manufacturer as approval of deviations during the accomplishment of an AD-mandated action. The Airworthy Product paragraph does not approve messages or other information provided by the manufacturer for deviations to the requirements of the AD-mandated actions. The Airworthy Product paragraph only addresses the requirement to contact the manufacturer for corrective actions for the identified unsafe condition and does not cover deviations from other AD requirements. However, deviations to AD-required actions are addressed in 14 CFR 39.17, and anyone

may request the approval for an alternative method of compliance to the AD-required actions using the procedures found in 14 CFR 39.19.

To address this misunderstanding and misinterpretation of the Airworthy Product paragraph, we have changed the paragraph and retitled it “Contacting the Manufacturer.” This paragraph now clarifies that for any requirement in this proposed AD to obtain corrective actions from a manufacturer, the actions must be accomplished using a method approved by the FAA, EASA, or Airbus’s EASA DOA.

The Contacting the Manufacturer paragraph also clarifies that, if approved by the DOA, the approval must include the DOA-authorized signature. The DOA signature indicates that the data and information contained in the document are EASA-approved, which is also FAA-approved. Messages and other information provided by the manufacturer that do not contain the DOA-authorized signature approval are not EASA-approved, unless EASA directly approves the manufacturer’s message or other information.

This clarification does not remove flexibility previously afforded by the Airworthy Product paragraph. Consistent with long-standing FAA policy, such flexibility was never intended for required actions. This is also consistent with the recommendation of the Airworthiness Directive Implementation Aviation Rulemaking Committee to increase flexibility in complying with ADs by identifying those actions in manufacturers’ service instructions that are “Required for Compliance” with ADs. We continue to work with manufacturers to implement this recommendation. But once we

determine that an action is required, any deviation from the requirement must be approved as an alternative method of compliance.

**Revisions to Notes in AD 2011-13-11, Amendment 39-16734 (76 FR 37241, June 27, 2011)**

We have removed Note 1 of AD 2011-13-11, Amendment 39-16734 (76 FR 37241, June 27, 2011), and included that information in paragraph (g)(3) of this proposed AD.

We have removed Note 2 of AD 2011-13-11, Amendment 39-16734 (76 FR 37241, June 27, 2011), and included that information in paragraph (i) of this proposed AD.

We have removed Note 3 of AD 2011-13-11, Amendment 39-16734 (76 FR 37241, June 27, 2011), from this proposed AD. The note explained differences with the previous MCAI.

**Change to AD 2013-16-09, Amendment 39-17547 (78 FR 48286, August 8, 2013)**

We have moved the information specified in paragraph (l) of AD 2013-16-09, Amendment 39-17547 (78 FR 48286, August 8, 2013), into paragraphs (j) and (l) of this proposed AD.

**Costs of Compliance**

We estimate that this proposed AD affects 851 airplanes of U.S. registry.

The actions that are required by AD 2011-13-11, Amendment 39-16734 (76 FR 37241, June 27, 2011), and retained in this proposed AD take about 7 work-hours per product, per inspection cycle, at an average labor rate of \$85 per work-hour. Based on

these figures, the estimated cost of the actions that are required by AD 2011-13-11 is \$595 per product.

The actions that are required by AD 2013-16-09, Amendment 39-17547 (78 FR 48286, August 8, 2013), and retained in this proposed AD take about 3 work-hours per product, per inspection cycle, at an average labor rate of \$85 per work-hour. Based on these figures, the estimated cost of the actions that were required by AD 2013-16-09 is \$255 per product.

We also estimate that it would take about 10 work-hours per product to comply with the basic requirements of this proposed AD. The average labor rate is \$85 per work-hour. Required parts would cost about \$17,140 for two actuators. Based on these figures, we estimate the cost of this proposed AD on U.S. operators to be \$15,309,490, or \$17,990 per product.

#### **Authority for This Rulemaking**

Title 49 of the United States Code specifies the FAA's authority to issue rules on aviation safety. Subtitle I, section 106, describes the authority of the FAA Administrator. "Subtitle VII: Aviation Programs," describes in more detail the scope of the Agency's authority.

We are issuing this rulemaking under the authority described in "Subtitle VII, Part A, Subpart III, Section 44701: General requirements." Under that section, Congress charges the FAA with promoting safe flight of civil aircraft in air commerce by prescribing regulations for practices, methods, and procedures the Administrator finds necessary for safety in air commerce. This regulation is within the scope of that authority

because it addresses an unsafe condition that is likely to exist or develop on products identified in this rulemaking action.

### **Regulatory Findings**

We determined that this proposed AD would not have federalism implications under Executive Order 13132. This proposed AD would not have a substantial direct effect on the States, on the relationship between the national Government and the States, or on the distribution of power and responsibilities among the various levels of government.

For the reasons discussed above, I certify this proposed regulation:

1. Is not a “significant regulatory action” under Executive Order 12866;
2. Is not a “significant rule” under the DOT Regulatory Policies and Procedures (44 FR 11034, February 26, 1979);
3. Will not affect intrastate aviation in Alaska; and
4. Will not have a significant economic impact, positive or negative, on a substantial number of small entities under the criteria of the Regulatory Flexibility Act.

### **List of Subjects in 14 CFR Part 39**

Air transportation, Aircraft, Aviation safety, Incorporation by reference, Safety.

### **The Proposed Amendment**

Accordingly, under the authority delegated to me by the Administrator, the FAA proposes to amend 14 CFR part 39 as follows:

## **PART 39 - AIRWORTHINESS DIRECTIVES**

1. The authority citation for part 39 continues to read as follows:

Authority: 49 U.S.C. 106(g), 40113, 44701.

### **§ 39.13 [Amended]**

2. The FAA amends § 39.13 by:

a. Removing Airworthiness Directive (AD) 2011-13-11, Amendment 39-16734 (76 FR 37241, June 27, 2011); and AD 2013-16-09, Amendment 39-17547 (78 FR 48286, August 8, 2013); and

b. Adding the following new AD:

**Airbus:** Docket No. FAA-2014-0529; Directorate Identifier 2013-NM-260-AD.

#### **(a) Comments Due Date**

We must receive comments by [INSERT DATE 45 DAYS AFTER DATE OF PUBLICATION IN THE FEDERAL REGISTER].

#### **(b) Affected ADs**

This AD replaces AD 2011-13-11, Amendment 39-16734 (76 FR 37241, June 27, 2011); and AD 2013-16-09, Amendment 39-17547 (78 FR 48286, August 8, 2013).

#### **(c) Applicability**

This AD applies to the Airbus airplanes, certificated in any category, identified in paragraphs (c)(1), (c)(2), (c)(3), and (c)(4) of this AD, all manufacturer serial numbers.

(1) Model A318-111, -112, -121, and -122 airplanes.

(2) Model A319-111, -112, -113, -114, -115, -131, -132, and -133 airplanes.

(3) Model A320-211, -212, -214, -231, -232, and -233 airplanes.

(4) Model A321-111, -112, -131, -211, -212, -213, -231, and -232 airplanes.

**(d) Subject**

Air Transport Association (ATA) of America Code 32, Landing Gear.

**(e) Reason**

This AD was prompted by a determination that the inspection interval of the MLG door opening sequence must be reduced. We are issuing this AD to detect and correct deterioration of the damping ring and associated retaining ring of the MLG door actuator, which can sufficiently increase the friction inside the actuator to restrict opening of the MLG door by gravity, during operation of the landing gear alternate (free-fall) extension system. This condition could prevent the full extension and/or down-locking of the MLG, possibly resulting in MLG collapse during landing and consequent damage to the aeroplane and injury to occupants.

**(f) Compliance**

Comply with this AD within the compliance times specified, unless already done.

**(g) Retained Repetitive Inspections/Replacement**

This paragraph restates the requirements of paragraph (g) of AD 2011-13-11, Amendment 39-16734 (76 FR 37241, June 27, 2011), with a formatting change. At the time specified in paragraph (g)(1) or (g)(2) of this AD, as applicable: Do a general visual inspection of the operation of the MLG door opening sequence to determine if a defective actuator is installed by doing all the applicable actions, including replacing the door actuator, as applicable, specified in the Accomplishment Instructions of Airbus Service

Bulletin A320-32-1309, Revision 01, dated June 19, 2006. Do all applicable replacements before further flight. Repeat the inspection thereafter at intervals not to exceed 900 flight cycles. Accomplishing the actions before April 27, 2007 (the effective date of AD 2007-06-18, Amendment 39-14999 (72 FR 13681, March 23, 2007)), in accordance with Airbus Service Bulletin A320-32-1309, dated March 7, 2006, is acceptable for compliance with the corresponding requirements in this paragraph. Doing the inspection required by paragraph (1) of this AD terminates the requirements of this paragraph.

(1) For airplanes on which a record of the total number of flight cycles on the MLG door actuator is available: Before the accumulation of 3,000 total flight cycles on the MLG door actuator, or within 800 flight cycles after April 27, 2007 (the effective date of AD 2007-06-18, Amendment 39-16734 (76 FR 37241, June 27, 2011)), whichever is later.

(2) For airplanes on which a record of the total number of flight cycles on the MLG door actuator is not available: Within 800 flight cycles after April 27, 2007 (the effective date of AD 2007-06-18, Amendment 39-16734 (76 FR 37241, June 27, 2011)).

(3) For the purposes of this AD, a general visual inspection is: “A visual examination of an interior or exterior area, installation, or assembly to detect obvious damage, failure, or irregularity. This level of inspection is made from within touching distance unless otherwise specified. A mirror may be necessary to enhance visual access to all exposed surfaces in the inspection area. This level of inspection is made under normally available lighting conditions such as daylight, hangar lighting, flashlight, or

droplight and may require removal or opening of access panels or doors. Stands, ladders, or platforms may be required to gain proximity to the area being checked.”

**(h) Retained Provision Regarding Reporting/Parts Return**

This paragraph restates the requirements of paragraph (h) of AD 2011-13-11, Amendment 39-16734 (76 FR 37241, June 27, 2011), with no changes. Although the Accomplishment Instructions of Airbus Service Bulletin A320-32-1309, Revision 01, dated June 19, 2006, specify submitting certain information to the manufacturer and sending defective actuators back to the component manufacturer for investigation, this AD does not include those requirements.

**(i) Retained Revision of the Airplane Flight Manual (AFM)**

This paragraph restates the requirements of paragraph (i) of AD 2011-13-11, Amendment 39-16734 (76 FR 37241, June 27, 2011), with formatting changes. Within 14 days after July 12, 2011 (the effective date of AD 2011-13-11), revise the Emergency Procedure Section of the AFM to incorporate the information in figure 1 to paragraph (i) of this AD. This may be done by inserting a copy of this AD into the AFM. When a statement identical to that in figure 1 to paragraph (i) of this AD has been included in the Emergency Procedure Section of the general revisions of the AFM, the general revisions may be inserted into the AFM, and the copy of this AD may be removed from the AFM.

Figure 1 to Paragraph (i) of this AD – AFM Revision

- If ECAM triggers the “L/G GEAR NOT DOWNLOCKED” warning, apply the following procedure:

Recycle landing gear.

- If unsuccessful after 2 min:

Extend landing gear by gravity. Refer to ABN-32 L/G GRAVITY EXTENSION.

**(j) Retained Repetitive Checks**

This paragraph restates the requirements of paragraph (j) of AD 2011-13-11, Amendment 39-16734 (76 FR 37241, June 27, 2011), with new optional actions. Within 14 days after July 12, 2011 (the effective date of AD 2011-13-11), or before the accumulation of 800 total flight cycles, whichever occurs later, check the post flight report (PFR) for centralized fault display system (CFDS) messages triggered within the last 8 days, in accordance with paragraph 4.2.1 of Airbus All Operators Telex (AOT) A320-32A1390, dated February 10, 2011. Repeat the check thereafter at intervals not to exceed 8 days or 5 flight cycles, whichever occurs later. If done in accordance with a method approved by the Manager, International Branch, ANM-116, Transport Airplane Directorate, FAA, the use of an alternative method to check the PFR for CFDS messages (e.g., AIRMAN) is acceptable in lieu of this check if the messages can be conclusively determined from that method. Repetitive inspections of the door opening sequence of the left-hand (LH) and right-hand (RH) doors of the MLG, in accordance with the Accomplishment Instructions of Airbus Mandatory Service Bulletin A320-32-1390, Revision 02, dated October 23, 2013, are an acceptable method of compliance for the actions required by this paragraph. Repetitive inspections of the door opening sequence of the LH and RH doors of the MLG of an airplane, as required by paragraph (p) of this AD, is an acceptable method to comply with the requirements of this paragraph.

**(k) Retained On-Condition Inspection**

This paragraph restates the requirements of paragraph (k) of AD 2011-13-11, Amendment 39-16734 (76 FR 37241, June 27, 2011), with new service information. If,

during any check required by paragraph (j) of this AD, a pair of specific CFDS messages specified in paragraph 4.2.1 of Airbus AOT A320-32A1390, dated February 10, 2011, has been triggered by both landing gear control and indication units (LGCIU) for the same flight, before further flight, inspect the door opening sequence of the affected doors of the MLG for discrepancies (i.e., if any condition specified in steps (a) through (d) of paragraph 4.2.2 of Airbus AOT A320-32A1390, dated February 10, 2011, is not met; or if any door actuator fails any inspection check specified in Airbus Service Bulletin A320-32-1390, Revision 02, dated October 23, 2013). Do the inspection in accordance with paragraph 4.2.2 of Airbus AOT A320-32A1390, dated February 10, 2011; or Airbus Service Bulletin A320-32-1390, Revision 02, dated October 23, 2013. As of the effective date of this AD, use only Airbus Service Bulletin A320-32-1390, Revision 02, dated October 23, 2013, for the actions required by this paragraph.

**(l) Retained Repetitive Inspections**

This paragraph restates the requirements of paragraph (l) of AD 2011-13-11, Amendment 39-16734 (76 FR 37241, June 27, 2011), with new service information, new optional actions, and reduced compliance times. At the applicable time specified in paragraph (l)(1) or (l)(2) of this AD: Inspect the door opening sequence of the LH and RH doors of the MLG for discrepancies (i.e., if any condition specified in steps (a) through (d) of paragraph 4.2.2 of Airbus AOT A320-32A1390, dated February 10, 2011, is not met; or if any door actuator fails any inspection check specified in Airbus Service Bulletin A320-32-1390, Revision 02, dated October 23, 2013). Do the inspection in accordance with the instructions of paragraph 4.2.2 of Airbus AOT A320-32A1390,

dated February 10, 2011; or Airbus Service Bulletin A320-32-1390, Revision 02, dated October 23, 2013. As of the effective date of this AD, use only Airbus Service Bulletin A320-32-1390, Revision 02, dated October 23, 2013. Repeat the inspection within 8 days or 5 flight cycles after the effective date of this AD, whichever occurs later, without exceeding 425 flight cycles since the most recent inspection; and thereafter repeat the inspection at intervals not to exceed 8 days or 5 flight cycles, whichever occurs later. In addition, whenever any airplane is not operated for a period longer than 8 days, do the inspection before further flight. Doing this inspection terminates the requirements of paragraph (g) of this AD. Repetitive inspections of the door opening sequence of the LH and RH doors of the MLG of an airplane, as required by paragraph (p) of this AD, is an acceptable method to comply with the requirements of this paragraph.

(1) For airplanes on which an inspection required by paragraph (g) of this AD has been done as of July 12, 2011 (the effective date of AD 2011-13-11, Amendment 39-16734 (76 FR 37241, June 27, 2011)): Within 800 flight cycles after doing the most recent inspection required by paragraph (g) of this AD, or within 100 flight cycles after July 12, 2011 (the effective date of AD 2011-13-11, Amendment 39-16734 (76 FR 37241, June 27, 2011)), whichever occurs later.

(2) For airplanes on which an inspection required by paragraph (g) of this AD has not been done as of July 12, 2011 (the effective date of AD 2011-13-11, Amendment 39-16734 (76 FR 37241, June 27, 2011)): Within 800 flight cycles after July 12, 2011.

**(m) Retained Replacement**

This paragraph restates the requirements of paragraph (m) of AD 2011-13-11, Amendment 39-16734 (76 FR 37241, June 27, 2011), with new service information. If any discrepancy (i.e., if any condition specified in steps (a) through (d) of paragraph 4.2.2 of Airbus AOT A320-32A1390, dated February 10, 2011, is not met; or if any door actuator fails any inspection check specified in Airbus Service Bulletin A320-32-1390, Revision 02, dated October 23, 2013) is found during any inspection required by paragraph (k) or (l) of this AD, before further flight, replace the affected MLG door actuator with a new MLG door actuator, in accordance with the instructions of Airbus AOT A320-32A1390, dated February 10, 2011; or Airbus Service Bulletin A320-32-1390, Revision 02, dated October 23, 2013. As of the effective date of this AD, use only Airbus Service Bulletin A320-32-1390, Revision 02, dated October 23, 2013, to do the actions required by this paragraph.

**(n) Retained: No Terminating Action for Certain Requirements**

This paragraph restates the statement of paragraph (n) of AD 2011-13-11, Amendment 39-16734 (76 FR 37241, June 27, 2011), with no changes. Replacement of the MLG door actuator as required by paragraph (m) of this AD is not a terminating action for the repetitive actions required by paragraphs (j) and (l) of this AD.

**(o) Retained Configuration and Part Number Determination**

This paragraph restates the requirements of paragraph (g) of AD 2013-16-09, Amendment 39-17547 (78 FR 48286, August 8, 2013), with no changes. At the later of the compliance times specified in paragraphs (o)(1) and (o)(2) of this AD: Do an

inspection to determine the configuration (modification status) of the airplane and identify the part number of the LH and RH LGCIU and MLG door actuators. A review of the airplane delivery or maintenance records is acceptable for compliance with the requirements of this paragraph provided the airplane configuration and installed components can be conclusively determined from that review.

(1) Prior to the accumulation of 800 total flight cycles since first flight of the airplane.

(2) Within 14 days after August 23, 2013 (the effective date of AD 2013-16-09, Amendment 39-17547 (78 FR 48286, August 8, 2013)).

**(p) Retained MLG Door Opening Sequence Repetitive Inspections**

This paragraph restates the requirements of paragraph (h) of AD 2013-16-09, Amendment 39-17547 (78 FR 48286, August 8, 2013), with no changes. If, during the determination and identification required by paragraph (o) of this AD, the configuration of the airplane is determined to be post-Airbus modification 39303 or post-Airbus Service Bulletin A320-32-1409 (Interlink Communication ARINC 429 installed), and both an LGCIU and a MLG door actuator are installed with a part number listed in table 1 to paragraph (p) of this AD: Except as provided by paragraph (s) of this AD, at the later of the compliance times specified in paragraphs (o)(1) and (o)(2) of this AD, and thereafter at intervals not to exceed 8 days or 5 flight cycles, whichever occurs later, do an inspection of the door opening sequence of the LH and RH MLG doors, in accordance with the instructions of Airbus Alert Operators Transmission (AOT) A32N001-13, dated June 24, 2013.

**Table 1 to Paragraph (p) of this AD**

<b>Component name</b>	<b>Part number</b>
LGCIU (LH and RH)	80-178-02-88012
LGCIU (LH and RH)	80-178-03-88013
MLG door actuator	114122006
MLG door actuator	114122007
MLG door actuator	114122009
MLG door actuator	114122010
MLG door actuator	114122011
MLG door actuator	114122012

**(q) Retained MLG Door Opening Sequence Corrective Action**

This paragraph restates the requirements of paragraph (i) of AD 2013-16-09, Amendment 39-17547 (78 FR 48286, August 8, 2013), with no changes. If a slow door operation or restricted extension is found during any inspection required by paragraph (p) of this AD: Before further flight, replace the affected MLG door actuator with a new or serviceable actuator, in accordance with the instructions of Airbus AOT A32N001-13, dated June 24, 2013.

**(r) Retained Terminating Action Limitation for Certain Actions**

This paragraph restates the requirements of paragraph (j) of AD 2013-16-09, Amendment 39-17547 (78 FR 48286, August 8, 2013), with no changes. Replacement of a MLG door actuator, as required by paragraph (q) of this AD, does not constitute terminating action for the repetitive inspections required by paragraph (p) of this AD, unless MLG door actuators having P/N 114122014 are installed on both LH and RH sides, in accordance with the Accomplishment Instructions of Airbus Service Bulletin A320-32-1407, dated May 14, 2013.

**(s) Retained Repetitive Inspection Exception**

This paragraph restates the requirements of paragraph (k) of AD 2013-16-09, Amendment 39-17547 (78 FR 48286, August 8, 2013), with no changes. Airplanes on which the LGCIU interlink is disconnected (Airbus modification 155522 applied in production, or modified in-service in accordance with the instructions of Airbus AOT A32N001-13, dated June 24, 2013), or on which MLG door actuators having P/N 114122014 are installed on both LH and RH sides (Airbus modification 153655 applied in production, or modified in-service in accordance with the Accomplishment Instructions of Airbus Service Bulletin A320-32-1407, dated May 14, 2013), are not required to do the actions required by paragraph (p) of this AD, provided that the airplane is not modified to a configuration as defined in paragraph (p) of this AD.

**(t) New Replacement of MLG Door Actuator having P/N 114122012**

Within 12 months after the effective date of this AD: Replace each MLG door actuator having P/N 114122012 with a MLG door actuator having P/N 14122014, in accordance with the Accomplishment Instructions of Airbus Service Bulletin A320-32-1407, dated May, 14 2013; or modify each actuator, including doing all applicable related investigative and corrective actions; in accordance with the Accomplishment Instructions of General Electric Service Bulletin 114122-32-105, Revision 1, dated March 26, 2013; except where General Electric Service Bulletin 114122-32-105, Revision 1, dated March 26, 2013, specifies to contact the manufacturer, before further flight, repair using a method approved by the Manager, International Branch, ANM-116, Transport Airplane Directorate, FAA; or the European Aviation Safety Agency (EASA); or Airbus's EASA Design Organization Approval

(DOA). If approved by the DOA, the approval must include the DOA-authorized signature.

**(u) New Replacement of Certain Other MLG Door Actuators**

Within 24 months after the effective date of this AD: Replace each MLG door actuator having a part number listed in table 1 to paragraph (p) of this AD, except P/N 114122012, with a MLG door actuator having P/N 14122014, in accordance with Accomplishment Instructions of Airbus Service Bulletin A320-32-1407, dated May 14, 2013; or modify each actuator, including doing all applicable related investigative and corrective actions; in accordance with the Accomplishment Instructions of General Electric Service Bulletin 114122-32-105, Revision 1, dated March 26, 2013; except where General Electric Service Bulletin 114122-32-105, Revision 1, dated March 26, 2013, specifies to contact the manufacturer, before further flight, repair using a method approved by the Manager, International Branch, ANM-116, Transport Airplane Directorate, FAA; or the European Aviation Safety Agency (EASA); or Airbus's EASA DOA. If approved by the DOA, the approval must include the DOA-authorized signature.

**(v) New Terminating Action**

Modification of an airplane as required by paragraphs (t) and (u) of this AD, as applicable, constitutes terminating action for all repetitive actions (PFR monitoring checks and inspections) required by this AD for that airplane.

**(w) New Conditional Terminating Action**

Replacement of a MLG door actuator as required by paragraphs (m) and (q) of this AD; or corrective actions as specified in Airbus AOT A320-32A1390, dated February 10, 2011; or replacement of a MLG door actuator as specified in Airbus Service

Bulletin A320-32-1390, Revision 1, dated September 21, 2011; do not constitute terminating action for the repetitive inspections required by paragraphs (j), (l), and (p) of this AD, unless MLG door actuators having P/N 114122014 are installed on both LH and RH sides, in accordance with the Accomplishment Instructions of Airbus Service Bulletin A320-32-1407, dated May 14, 2013.

**(x) New Exception to AD Requirements**

An airplane on which MLG door actuators having P/N 114122014 are installed on both LH and RH sides (Airbus MOD 153655 applied in production, or modified in service as specified in Airbus Service Bulletin A320-32-1407, dated May, 14 2013; General Electric Service Bulletin 114122-32-105, dated January 17, 2013; or General Electric Service Bulletin 114122-32-105, Revision 1, dated March 26, 2013; is not affected by the requirements of paragraphs (j) through (u) of this AD, provided that no MLG door actuator with a part number in table 1 to paragraph (p) of this AD has been installed on that airplane since first flight, or since modification, as applicable.

**(y) New Parts Installation Prohibitions**

(1) Except as specified in paragraph (y)(2) of this AD, as of the effective date of this AD, do not install on any airplane a MLG door actuator, having a part number listed in table 1 to paragraph (p) of this AD.

(2) For an airplane subject to the requirements of paragraphs (t) and (u) of this AD, as applicable, do not install a MLG door actuator having a part number listed in table 1 to paragraph (p) of this AD after modification of the airplane.

**(z) Credit for Previous Actions**

(1) This paragraph provides credit for actions required by paragraphs (k), (l), and (m) of this AD, if those actions were performed before the effective date of this AD using Airbus Mandatory Service Bulletin A320-32-1390, Revision 01, dated September 21, 2011, which is not incorporated by reference in this AD.

(2) This paragraph provides credit for actions required by paragraphs (t) and (u) of this AD, if those actions were performed before the effective date of this AD using General Electric Service Bulletin 114122-32-105, dated January 17, 2013, which is not incorporated by reference in this AD.

**(aa) Other FAA AD Provisions**

The following provisions also apply to this AD:

**(1) Alternative Methods of Compliance (AMOCs):** The Manager, International Branch, ANM-116, Transport Airplane Directorate, FAA, has the authority to approve AMOCs for this AD, if requested using the procedures found in 14 CFR 39.19. In accordance with 14 CFR 39.19, send your request to your principal inspector or local Flight Standards District Office, as appropriate. If sending information directly to the International Branch, send it to ATTN: Sanjay Ralhan, Aerospace Engineer, International Branch, ANM-116, Transport Airplane Directorate, FAA, 1601 Lind Avenue SW., Renton, WA 98057-3356; telephone 425-227-1405; fax 425-227-1149. Information may be emailed to: 9-ANM-116-AMOC-REQUESTS@faa.gov. Before using any approved AMOC, notify your appropriate principal inspector, or lacking a principal inspector, the

manager of the local flight standards district office/certificate holding district office. The AMOC approval letter must specifically reference this AD.

**(2) Contacting the Manufacturer:** Except as specified in paragraph (j) of this AD for the use of an alternative method to check the PFR for CFDS messages, for any requirement in this AD to obtain corrective actions from a manufacturer, the action must be accomplished using a method approved by the Manager, International Branch, ANM-116, Transport Airplane Directorate, FAA; or the European Aviation Safety Agency (EASA); or Airbus's EASA Design Organization Approval (DOA). If approved by the DOA, the approval must include the DOA-authorized signature.

**(3) Previously Approved AMOCs:** AMOCs approved previously for the ADs identified in paragraphs (aa)(3)(i) and (aa)(3)(ii) of this AD, are approved as AMOCs for the corresponding provisions of this AD.

(i) AD 2011-13-11, Amendment 39-16734 (76 FR 37241, June 27, 2011).

(ii) AD 2013-16-09, Amendment 39-17547 (78 FR 48286, August 8, 2013).

**(bb) Special Flight Permits**

Special flight permits may be issued in accordance with sections 21.197 and 21.199 of the Federal Aviation Regulations (14 CFR 21.197 and 21.199) to operate the airplane to a location where the airplane can be modified (if the operator elects to do so), provided the MLG remains extended and locked, and that no MLG recycle is done.

**(cc) Related Information**

(1) Refer to Mandatory Continuing Airworthiness Information (MCAI) EASA Airworthiness Directive 2013-0288, dated December 6, 2013, for related information.

This MCAI may be found in the AD docket on the Internet at <http://www.regulations.gov> by searching for and locating Docket No. FAA-2014-0529.

(2) For Airbus service information identified in this AD, contact Airbus, Airworthiness Office – EIAS, 1 Rond Point Maurice Bellonte, 31707 Blagnac Cedex, France; telephone +33 5 61 93 36 96; fax +33 5 61 93 44 51; email [account.airworth-eas@airbus.com](mailto:account.airworth-eas@airbus.com); Internet <http://www.airbus.com>.

(3) For General Electric service information identified in this AD, contact GE Aviation, Customer Support Center, 1 Neumann Way, Cincinnati, OH 45215; phone: 513-552-3272; email: [cs.techpubs@ge.com](mailto:cs.techpubs@ge.com); Internet: <http://www.geaviation.com>.

(4) You may view this service information at the FAA, Transport Airplane Directorate, 1601 Lind Avenue SW., Renton, WA. For information on the availability of this material at the FAA, call 425-227-1221.

Issued in Renton, Washington, on August 1, 2014.

Jeffrey E. Duven,  
Manager,  
Transport Airplane Directorate,  
Aircraft Certification Service.

[FR Doc. 2014-19157 Filed 08/12/2014 at 8:45 am; Publication Date: 08/13/2014]